

Surely internal hæmorrhage would be as likely to occur to a fatal extent in the latter as in the former case under the use of this mechanical agent.

We have noticed, at some length, the contents of Dr. Lee's work, which, in consequence of its embracing only a few subjects, notwithstanding that these are of a most interesting character, is not likely to be reprinted in this country. The author is evidently well-informed in the department of medicine, to which he has more especially devoted himself. He appears, too, to be well grounded in the general principles of his profession, and from the zeal and ability exhibited in the essays which he has already published, we look forward with the most favourable anticipations for further useful contributions to the science from his pen.

R. D.

ARR. XII. *On the Influence of Atmosphere and Locality; Change of Air and Climate; Seasons; Food; Clothing; Bathing; Exercise; Sleep; Corporeal and Intellectual pursuits, &c. &c. on Human Health, constituting Elements of Hygiene.* By RONLEY DUNGLISON, M. D., Professor of Materia Medica, Therapeutics, Hygiene, and Medical Jurisprudence in the University of Maryland, &c. &c. Philadelphia, Carey, Lea & Blanchard, 1855, pp. 514.

THE want of a precise and practical compendium of the principles of hygiene, has long been felt by the profession in this country, especially by the younger members of it, who, from the deficiency of elementary treatises, and still more, of a proper course of instruction on this important subject, are in a great measure obliged to rest content with the general views of the operations of external agents on the human organization, which they acquire whilst pursuing the general routine of their medical studies.

"It is true," says Dr. Combe, "that almost every medical man, sooner or later, works out this knowledge for himself; but, in general, he attains it later than he ought to do, and seldom so completely as he would have done had it been made a part of his elementary education, to which he saw others attach importance."

The deficiency, above alluded to, is in a great measure supplied by the work now before us, and we trust that this publication will prove the forerunner to a better order of things, and may demonstrate to those who have the guidance of our schools of medicine, the necessity that exists for a more extended and liberal course of instruction than is now given.

"In this country and Great Britain," says the author in his preface, "hygiene has not usually formed a distinct branch of university education, although in the different practical chairs it may have been noticed in a detached manner; but in continental Europe it has been formed into a separate subject."

In the United States it has lately been introduced into the University of Maryland, as part of the duties assigned to the professor of *Materia Medica*. This is one step gained, but it is not enough. The present state of our science demands that hygiene and medical jurisprudence should be fully taught; and we hope that many years will not elapse before they are made the province of a distinct professorship in every medical school in the Union. We know it has been asserted that all that is requisite to be known on these subjects can be incorporated with the other branches of instruction; an assertion worse than idle, and scarcely requiring an attempt at refutation. Let any one of the graduates of our medical schools be asked what he has learned of the principles of these important branches of medical learning, and, if he is candid, the answer must be, little or nothing. If this should not convince the incredulous, let him attend a judicial examination on subjects involving any point of hygiene or medical jurisprudence, and if he does not become satisfied of the almost total ignorance of a generality of the medical witnesses respecting it, we will at once admit that we have acted unadvisedly in the course we have pursued since the establishment of this Journal, in urging upon the profession a strict attention to these subjects.

Dr. Dunghlison states that the want of a text book to accompany his lectures induced the present publication to supply the deficiency, and at the same time to "enable the general reader to understand the nature of the actions of various influences on human health, and assist him in adopting such means as may tend to its preservation." In this we think he has succeeded in a very satisfactory manner, and although we may not agree with the learned author in many of his conclusions, or ascribe the same value to some of the facts he has adduced in support of them, we can truly say that his work adds another to the many claims he has on the gratitude of the profession, and can recommend it to the public with the utmost confidence as one of the best treatises on the subject, we possess.

Before entering on the consideration of the topics that more especially appertain to hygiene, the author makes some brief observations on certain points of general physiology, an ignorance of which, as he justly observes, would prevent the student from fully comprehending the subject; as these, however, are more calculated to impart the requisite information to the general than to the professional

reader, and have been more fully developed in his work on "Human Physiology," which has been noticed in a former volume of this Journal, we shall pass them over without comment, except his definition of hygiene, which we think is somewhat involved. Thus, after stating that a harmonious performance of the functions constitutes health, whilst an aberration of one or more of them produces, or is in fact itself a state of disease, he goes on to say—

"The object of hygiene is to inquire into the circumstances which may give rise to this aberration, or, in other words, into the influence of physical and moral agents on healthy man; and thence to deduce the best means for preserving health, and for developing all the healthful energy of which the functions are capable."

Now without wishing to be captious, we would object to the two clauses of this definition as not conveying the same ideas. The first would seem to exclude from the objects of hygiene all those influences which act in a beneficial manner on the organization, and restricts it to such only as may cause disease; whilst the latter takes the true and more extended view of it as including the operation of all these agents. The best definition of this term is that given by FODERE, "Hygiene is the art of preserving health and preventing disease."

From this it will be perceived that hygiene includes the whole of what the ancients classed under the name of the six non-naturals; namely, *air, aliment, exercise, the passions and affections of the mind, and repletion and evacuation*; and these general divisions will be found, even in the present condition of civilized man, to include the greater portion of those influences which are capable of acting in a beneficial or in an injurious manner on the health or well being of an individual. Dr. Dunglison, however, makes a somewhat different division of the subject, and in as many chapters considers the effects of atmosphere and locality, food, clothing, bathing, exercise, sleep, and corporeal and mental occupations. These we shall now proceed to examine, though it will be impossible for us to enter into a regular review or analysis of all the facts and opinions adduced.

The first chapter, as we have already stated, is devoted to the consideration of the important subjects of atmosphere and locality, and Dr. Dunglison has treated on these at some length, and, in the happiest manner. He first inquires into the properties of the air we breathe, and the influence of its various and varying conditions on the health of man. After mentioning that the general chemical composition of the air is the same in all places and at all heights, he adverts to the effects of its augmented or diminished density, and clearly shows, that however prejudicial a sudden increase

or diminution of atmospheric pressure may be, that where the change takes place gradually, no permanently injurious effects are produced.

"Even the small period that elapses in the ascent of a balloon to this giddy elevation, (21,735 ft. French,) is sufficient for the purpose, and death did not result where the elevation attained in this manner was even 6,095 feet greater than that indicated by Cassini as the limit of animal existence. The highest town of any extent on the earth, is Potosi in Bolivia, celebrated for the mines in its vicinity. It is 13,265 feet above the level of the Pacific Ocean. Two hundred years ago it is said to have contained 160,000 inhabitants, but the number is now not greater than 12,000. Perhaps the highest inhabited spot on this hemisphere is the farm of Antisana in Quito, the elevation of which is 13,400 feet. Yet the human family are capable of subsisting at these lofty elevations with the same facility as amidst the Arctic snows, when once habituated to them; inconvenience being felt by new settlers alone, and even these by the gradual ascent have their different organs accommodated to the new external relations."

We are, however, very deficient in information as regards the disposition to disease, or the reverse, produced by a permanent residence in elevated regions, though from the present state of our knowledge on the subject it would appear, where the density of the air is widely different from that at the level of the sea, that its effects on the system are not very marked, and that many of the phenomena attributed to this cause are in fact owing to other atmospherical conditions, of which temperature is perhaps the most efficient.

One of the great characteristics of man, is his capability of existing in the most opposite climates, and his faculty of migrating with impunity from the icy regions of the north to the burning plains of the tropics, provided the transition be not too rapid. This capability of change of temperature appears to be owing to a corresponding modification that takes place in the important functions of respiration and calorification, both of which increase in energy when an individual is subjected to the influence of a climate colder than that to which he had been accustomed; whilst the reverse occurs in an opposite change of circumstances.

But although man can thus exist in all climates, an elevated temperature is less congenial to him than one which is more moderate; though we think Dr. Dunglison has admitted too much in the following statement.

"Independently of all other considerations, the elevated temperature of the torrid regions of the globe appears to be positively detrimental to animal health. The constant evaporation by cutaneous and pulmonary transpiration maintains the absorbents of the intestines in a state of irregular erethism, and

hence disposed to assume a morbid condition under favourable existing influences."

Now, it is well known that, however detrimental the temperature of tropical climates may be to human health, that it is in the highest degree favourable to the existence of many of the other races of animals. But this is not all—it does not appear that mere temperature, unaided by other causes, is unfavourable to longevity and exemption to disease in man. The most striking instances of long life on record, are those given in the Bible, as occurring among natives of Syria and the adjacent countries; and even at the present day, if the accounts of BUCKINGHAM and other travellers in that part of the world are to be relied upon, the Arabs and Moors of the desert present more individuals who have attained a great age, than can be found in an equal population in any portion of the globe; and yet they are exposed to an almost vertical sun.

As we before said, a moderately depressed temperature is, generally speaking, the best fitted to human existence, and to the full development of his faculties, and accordingly we find that it is in temperate climates that man has attained the highest degree of civilization. In countries where the thermometer ranges but little above the freezing point during most of the year, man, although capable of existing, and even of attaining to an advanced age, suffers the benumbing influence of the climate, both in his animal and mental functions. Where he is not sufficiently protected against its depressing effects—

"The nervous system ceases to be affected by impressions from without, and an irresistible desire for sleep comes on, which, if indulged in, becomes the sleep of death, and is perhaps one of the easiest modes in which life departs from the body."

Dr. Dunglison cites the remark of LARREY, that the inhabitants of southern Europe suffered less during the retreat of the French from Moscow, than those from northern countries, and thinks it may be explained by the greater moral energy of the first. Though we admit that this had doubtless some influence, we are inclined to attribute this phenomenon to the same causes that produce a sensation of warmth on the surface after coming out of a cold bath; namely, the reaction produced in the system, by the impression of a stimulus to which it was not habituated.

The author next considers the influences exerted by different hygrometric states of the atmosphere, and discusses them in an able and satisfactory manner. To a certain degree, dry air is more favourable to a due performance of the animal functions than moist,

but when combined with too high a thermometrical temperature, it becomes injurious, producing too great an evaporation from the lungs. On this account, the dry heat produced by the use of anthracite as fuel, when carried to the excess, which is too frequently the case, cannot fail to increase the number of pulmonary diseases. A moist and heated atmosphere is, perhaps, the most prejudicial to human health; as besides its relaxing and debilitating effects, it is much more liable to become charged with miasmata of all kinds than a dry one; but as we shall notice the subject of miasmata in another place, we will, at present, pass it over, to quote some observations of the author on hardening children, as it is called, which contain advice that cannot be too often enforced.

"Some persons endeavour, as they say, to fortify their children from earliest infancy, so that they may resist them, (vicissitudes of temperature,) or be less affected by them, than others with whom the same plan has not been pursued. It need scarcely be said, that all undue clothing and residence in heated apartments without change, are injurious, but at the same time it is not every infant that will bear the plans which are employed by some parents to harden them; such as bathing every morning in cold water, exposure to the air at all temperatures, light clothing, even when the weather is cold, &c. Many an infant has fallen a victim to this dogged persistence in error. Two-fifths, at least of mankind die of acute diseases, and a large majority of these are induced by exposure to cold. If, however, the infant is habituated to daily tepid bathing and ablution for a time, and the temperature of the fluid be gradually depressed, until cold water alone is used, and if it be comfortably clothed with flannel next the skin, and be sent into the fresh air, whenever the weather is serene, even if the temperature should be somewhat depressed, it may be accustomed to exposure as far as is prudent, and better adapted for bearing with impunity the vicissitudes of the weather."

In observing on the influence of light on the animal economy, Dr. Dunglison is not as full as might have been expected, and has overlooked some of the most striking and best authenticated cases where the continued deprivation of this necessary stimulus not only induced disease, but also was the cause of the production of monstrosities. As regards electricity, we have sufficient data to demonstrate in the fullest manner that the human system is frequently affected in a very sensible manner by electrical changes, and it is not improbable that the appearance and existence of epidemics are in some measure connected with or dependent upon these changes. But we have no positive knowledge of this fact, nor can we arrive at the truth until a long succession of observations on the subject have been registered, both during the existence and in the absence of epidemic constitutions of the atmosphere.

In the next section Dr. Dunglison goes at some length into the dis-

cussion of atmospheric vitiations and their consequences, which we shall pass over without attempting to analyze, as, although it is exceedingly interesting and contains the sum of our knowledge on these important subjects, no new views or facts are presented that require our notice. The following remark, however, deserves attention, from its bearing on medical police, and requires to be generally known.

“The air is apt, also, to be loaded with emanations from animal and vegetable substances in a state of decomposition, and there are many trades which are carried on in putridity, but we shall endeavour to show that the admixture of such emanations with the air does not affect public salubrity to such an extent as might be imagined, although the nervous and the delicate, before they become accustomed to the offensive odours, may be more or less disagreeably impressed. The same may be said of butcheries, dissecting rooms, and cemeteries.”

To this may be added the fact, that during the prevalence of epidemics, persons engaged in these trades suffer but seldom from attacks of the disease.

With regard to the nature of malaria or miasmata, Dr. Dunglison says, that in the state of ignorance that envelopes us, we cannot fix positively, or even with any thing like probability, upon any cause or combination of causes that certainly give rise to them. This is but too true, for, however striking may be the effects of such emanations, their nature has defied the art of the most skillful analyst. In our Periscope will be found an abstract of a memoir recently communicated to the French Academy of Sciences by M. BONSSINGAULT, who thinks that he has detected the deleterious principle, namely, hydrogen; but his experiments require much confirmation before we can admit this as the efficient agent in the production of the numerous diseases which can be traced to a miasmatic origin.

In the succeeding section the author goes on to say, that although in most cases we are enabled from experience to form some judgment of the comparative prevalence or absence of miasmata, that this is by no means universally the fact, as for instance, in some of the most malarious districts of Italy, the soil, &c. afford no physical signs to indicate its presence, whilst the wretched appearance of the inhabitants give the strongest evidence of its prevalence and deleterious powers. In fact, notwithstanding all the investigations that have been made, and all the theories that have been framed, our knowledge of the true nature and causes of miasmata remains as yet extremely imperfect.

We shall not follow Dr. Dunglison in his remarks on the mortality of countries, as we have not the space at present, to insert the comparative tables, without which the subject could not be fairly un-

derstood. We cannot avoid mentioning, however, that the erroneous statements of European writers as regards the medical statistics of the United States, and more especially of the southern portions of it, are fully and satisfactorily refuted. He concludes his observations on the subject with the following just remark.

"We may conclude, then, that a great and ever-acting cause of the difference of salubrity of countries is seated in the locality; that is, in the soil that forms them, and in the air that circulates above them; and although we may be able to modify the condition of the former, and improve the circulation of the latter, we can rarely succeed in annihilating either of those influences."

With respect to the influence of change of air and travelling in the maintenance or restoration of health, Dr. Dunglison has adopted the views of JOHNSON and CLARK, and adduces some additional proofs in support of the great advantages to be derived from the change of the physical circumstances of the atmosphere in which we are habitually placed, especially in those morbid states of the system which appear to be kept up in some measure by habit, and perhaps still more in what are termed the nervous affections.

The effect of the seasons of the year upon human health is in a great measure dependent on their different temperatures, and as a mutation in this respect, is almost indispensable to the continuance of a perfect state, so those countries which have a marked spring, summer, autumn and winter, are equally distinguished by a greater development in the corporeal and mental faculties of their inhabitants. In fact, there is no greater fallacy than that of considering a country possessing an unvarying temperature as necessarily a healthy one, and that atmospheric vicissitudes are the main causes of disease. That a serene and ever temperate climate is favourable to the amelioration or cure of certain maladies there can be no doubt, but it will universally be found that the healthiest portions of the globe are those in which the heats of summer are succeeded by the frosts of winter. This leads us to notice another common error, which has been fully refuted by our author—that what is termed unseasonable weather, as the occurrence of unusual warmth in the winter season, must necessarily be unhealthy. There is an old proverb, that "a green yule maketh a fat kirkyard," which is even at the present day received as an indisputable axiom by the many, notwithstanding the evidences which are constantly offered, that mild winters are in general far more healthy than severe ones.

We have remarked, that although a constant equability of temperature was not as favourable to the full development of the animal and mental functions, as a due succession of seasons; that this



equability was of great importance in the cure or amelioration of certain diseases; this is particularly the case with consumptive affections; hence, it has been a matter of anxious inquiry among practitioners, how they could best shield their patients from the effects of the depressed temperature of the winter, and the vicissitudes of spring and autumn. It has been satisfactorily shown, that a close confinement to his room, in which an elevated and equable temperature is maintained, is attended with almost as many disadvantages as benefits to a patient labouring under phthisis; for the vitiation of the atmosphere, which necessarily takes place from the want of due ventilation, counterbalances, in a great measure, the good effects otherwise to be derived from this plan of treatment. Another, and very common plan, has been to send these patients to a milder climate during the seasons alluded to; this measure has proved eminently beneficial in some cases, but unhappily in a vast majority of instances, the unfortunate sufferer merely leaves his home, and the affectionate and ever-watchful attentions of his family and friends, to find an untimely grave on a distant shore. At the same time, however, injudicious and cruel it may be to advise individuals whose lungs are ulcerated, or who present other symptoms of an advanced stage of phthisis, to seek for relief by a change of climate, there is not the shadow of a doubt, that in the earlier periods of this disease, and in those pulmonary affections which may lead to it, a removal to a more genial climate is beneficial.

The great difficulty is to know where this is to be found, as it has been satisfactorily shown, that the climate of Italy, which, at one time was supposed to possess the necessary requisites of mildness and equability, is, on the contrary, exceedingly variable, and wholly unfit for the valetudinarian, and the same may be said of the south of France. Of late years the Island of Madeira has been highly spoken of by many European practitioners; but it does not appear to possess any advantages as a winter residence, over many places on this continent, though, it must be confessed, that most of these are unsafe during the summer months. Dr. Dunglison has discussed this subject at some length, without giving any decided opinion in favour of any particular spot; but he seems inclined to prefer St. Augustine, and adduces some strong testimony in corroboration of its fitness for a residence for invalids during the cold months.

In chapter second, Dr. Dunglison proceeds to the consideration of the important subject of food, or the *materia alimentaria*, respecting which more treatises have been written, and more absurd theories framed, than on any other topic connected with the science of medi-

cine, contagion not excepted. We are, therefore, glad to meet with a plain, sensible and practical series of observations like the present, which may be equally recommended to the perusal of general and medical readers.

We shall not attempt to discuss whether man should live on vegetable or animal food alone; it is sufficient for us, that in the present state of society, and in this part of the world, that he is omnivorous, and the best argument in favour of this practice is, that it is perfectly consonant to health; the fact appears to be, that nature having fitted the human race to subsist indifferently on animal or vegetable food, or both, the circumstances of climate or locality under which nations or tribes have been placed, have in all cases led to the adoption of those articles of diet which were most readily attainable. In an advanced stage of civilization, and more especially in temperate climates, man derives his food, (under which we include condiments,) from all the kingdoms of nature. Earth, air and ocean, have been ransacked, and there is scarcely a living creature that has not at different times and in different nations been resorted to as an article of diet; and what is turned from with disgust by the inhabitants of one part of the world, is eagerly sought for as the greatest delicacy by the natives of another.

When speaking of the nutritive and digestible properties of food, the author observes that they are by means synonymous and convertible terms.

"Although one ounce of fat meat is estimated to afford nutriment equal to four ounces of lean, it requires far more labour on the part of the digestive organs, and undergoes no change whatever in the stomach, whilst it remains much longer in that organ. This a singular physiological fact. It has been generally conceived that the pylorus acts, as its name imports, the part of a janitor at the lower orifice of the stomach, and that it does not permit the food to pass into the small intestine, until it has undergone the physical process of chymification, that is, solution in the gastric secretions. Yet castor oil proceeds onwards with rapid progress, whilst a bland oil is detained longer than any other kind of aliment, and vegetable substances pass on unchanged, or but little changed, as has been remarked in cases of artificial anus, much sooner than animal substances that are more easy of assimilation."

Broussais and others have attributed this to what they term an internal gastric sense, which exerts an elective agency, and detains the digestible, whilst it suffers the indigestible parts of the food to pass on. With all deference to this learned physiologist, we think that this admits of easy explanation, without the creation of an internal sense. When indigestible food is introduced into the stomach, it acts as an irritant, and as a natural consequence of the increased action thus induced, the offending substance is in most cases speedily expelled

through the pylorus into the small intestines, where it may continue to exercise the same morbid influence, and thus cause purgation, by which it is finally ejected from the body.

The process of digestion being mainly one of solution, it must be evident that food should be presented to the stomach in a form that requires the least exertion of power on the part of that viscus. The author of "The art of Invigorating and Prolonging Life" justly, but quaintly observes—

"Our food must be done either by our cook or by our stomach, before digestion can take place, and surely no man in his senses would willingly be so wanting in consideration to that organ as to give it the needless trouble of cooking it, and digesting it also, and thus waste its valuable energies in work which a spit or stew-pan can do better."

The generality of alimentary articles become more digestible by the various culinary operations to which they are subjected; but this is not always the case, thus oysters in a raw state appear to call on the digestive powers in a much less degree than when they are stewed, roasted, &c. and cabbage disagrees with more persons in a boiled, than in a crude state.

We shall not attempt to follow Dr. Dunglison in his observations on each particular article of food, as we could not do justice to them without extending our remarks beyond all due limits; added to which, we are extremely sceptical as regards the criteria by which the digestibility or indigestibility of particular articles have been judged. In most cases the test has been whether they suited the state of the gastric organs of the writer. Now, idiosyncrasy, habit, and the particular circumstances of the case exercise so strong an influence, that it is almost impossible to decide, *à priori*, what will agree or disagree with an individual, and it is the height of absurdity to proscribe any article of diet because it has been found injurious in a few cases.

"Perhaps," says our author, "the best opinion as regards the wholesomeness of an aliment, in the case of any particular individual, is comprised in the answer of the facetious Mandeville, who, when asked by the ladies of the court whether this or that article of diet was wholesome, demanded whether they liked it and it agreed with them; if so, it was wholesome."

To attempt to live by rule and measure with respect to our food, and to strive to establish a universal standard of the wholesomeness or unwholesomeness of the various articles composing it, would be as absurd as the practice of the philosophical tailors of Laputa, who, we are informed by Gulliver, though they manufactured clothes on abstract principles, never were so fortunate as to make them fit.

"It is impossible to indicate accurately the quantity of food proper for each

individual. Children, and those in the age of adolescence, when every thing is undergoing development, require more nourishment than the adult or the aged. Yet the latter, especially when far advanced in life, appear to demand a larger quantity of food than the former. The assimilative organs in them perform their functions but imperfectly and tardily, and a much smaller proportion of nutritive matter is separated; hence it is that more of the raw material is necessary."

Though we agree with Dr. Dunglison in the first of these propositions, we are by no means disposed to admit that the aged should partake largely of food; for as the digestive function in them is also imperfect, an accumulation of the raw material, as the author terms it, cannot fail of being productive of gastric distress, and of calling into action those fatal disorders of the encephalon to which most individuals at an advanced period of life are peculiarly liable. A large proportion of the apoplexies and palsies of the old occur soon after the ingestion of a meal. The proper diet at this term of existence should be such as is at the same time nutritious and easy of digestion.

All writers agree that it is of importance that the number of meals and the times at which they are taken should be regular. By this means, as has been justly observed by Dr. DARWIN, the stomach is not only stimulated to requisite action by the food ingested, but also by periodical habit. This latter undoubtedly exercises no little sway, for it is well known that if a meal be not taken at the usual time, the feeling of hunger which existed is very apt to cease, until the return of the next period at which food is habitually taken.

"The number of meals must in a great measure be regulated by the age. Children eat more frequently than adults, with impunity, and even with advantage, but it is important that they should not take too much at a time; and in this way digestion may be readily accomplished, as the quantity of food may not exceed the powers."

This is sound doctrine, but it should not be abused; much mischief has been done to invalids and dyspeptics by constantly keeping their gastric organs in a state of excitement by the undue repetition of the times of their taking food, and the common adage that "the stomach is like a school boy, always at mischief unless it be employed," is like too many of its class, founded on error, and is the more dangerous, because it chimes in with the popular dread of debility.

We shall not stop to discuss the number of meals that should be taken in the day, as this must depend upon a variety of contingent circumstances, of which habit is the most influential; those usual in this country have become so firmly established by custom and convenience as to preclude the necessity of saying any thing on the subject. With regard to the evening repast, both theory and experience

concur in demonstrating that it should be light, and composed in a great measure of fluids, as the stomach having accomplished the heavier task imposed on it, that of digesting the mass of solid food taken in at dinner, requires the presence of bland and diluting fluids, to aid its restoration to a state of calm and quiescence.

As regards supper there ought to be but one opinion; that it is seldom necessary, and in most cases positively injurious.

"When the stomach is loaded, the circulation is interfered with, and the brain receives irregular impressions, which give occasion to painful and distressing dreams, nightmare, and, when in a higher degree, to somnambulism. Hence it is in civic life, where plethora is apt to be induced by continued full living, apoplexy so frequently follows a surfeit at supper."

At the same time, a *light* repast before retiring to rest is allowable or even requisite to dyspeptics, and almost every practitioner must have met with cases where, if food was not taken at this time, patients passed a restless and uneasy night, from a nervous irritation in their gastric organs.

The following observations deserve notice, and have been fully verified during the prevalence of the cholera in this city.

"Every sudden change in regimen is unwholesome. Food containing but little nutriment, and not markedly wholesome, may agree better when we are accustomed to its use, than that which is more wholesome. Whenever, therefore, epidemic sickness prevails, a change of regimen should be made gradually, for fear that the new circumstances under which the individual may be placed, may occasion so great a change in the economy as to render him more liable to an accession of disease."

We must, however, hasten to conclude our observations and extracts from this part of Dr. Dunglison's work, although we are sensible we have given but a feeble idea of it, and have not, perhaps, done justice to him in giving so cursory a sketch of it. We are glad to find that he has not followed the example of most writers on dietetics, and enrolled himself under the banner of the "Snatchaways," who have done more harm by inducing their unfortunate patients to restrict themselves to the most simple and mawkish articles of food, than would have occurred if they had remained "*Epicuri de grege porci*."

Dr. Dunglison next makes some very apt and judicious comments on a custom by far too prevalent in this country, the use of tobacco, which we are convinced has occasioned more derangement of the gastric organ than have ever arisen from excesses in eating and drinking.

"When tobacco is used," says he, "in any shape, to excess, it blunts the sensibility, not only of the organs with which it comes in contact, but of the

whole nervous system; or it induces so great a susceptibility to impressions, that existence becomes painful."

The worst and most offensive mode in which tobacco is used, is that of chewing, as whilst in this way it acts more directly and forcibly on the digestive organs, it is the most disgusting to others. The only defence that has been made of the employment of this poisonous herb, is that it is useful in preventing the impression of miasmata; but, as is observed by Dr. Dunglison, there does not appear to be much foundation for the belief. In fact, a custom must be a very bad one, when its votaries are never solicitous to gain new adherents; and we can fully credit the declaration of Dr. FRANKLIN, that he had never known a man who used tobacco who advised him to follow his example.

The third chapter is devoted to the consideration of clothing, and contains some very judicious remarks on the importance of a strict attention to adapting it to meet the rapid vicissitudes of temperature so frequent in this country. The great requisites of a dress are, to be so adapted to the body as not to obstruct the motions of the limbs or the more important functions of life, and to be formed of such materials as will preserve the skin at that degree of temperature that is most agreeable. It must be evident, that those articles which are bad conductors of caloric are the warmest when the external temperature is lower than that of the body, and, on the contrary, are the coolest when the atmospheric heat is greater than the usual temperature of man.

"Clothes, formed of hemp or linen, are good conductors of caloric, and therefore cool. They readily imbibe and part with humidity, and when wet they are better conductors of caloric than when dry. They are, therefore, not well adapted for cool climates and seasons. Cotton is a worse conductor of caloric, and absorbs and retains a portion of the perspiration. It is consequently a warmer clothing. Whilst wool is a very bad conductor of caloric, and never allows the matter of perspiration to escape to such an extent as to cause a powerful sensation of cold."

Hence the great advantage of wearing flannel next the skin in cold and temperate regions, as it forms one of the best protections against the impression of cold, and the sudden vicissitudes of temperature to which such countries are continually liable. But the properties of clothing do not depend on their texture only; their colour exercises no little influence. As white reflects the calorific rays, and black and the other dark colours absorb them, clothes of a light colour are best fitted not only to impede the transmission of heat from without in warm weather, but also to retain the natural temperature of

the body in an opposite state of the thermometer. There is another point connected with colour which should not be overlooked; namely, the greater aptitude the dark colours possess for absorbing and retaining odours; hence, observes Dr. STARK, "it would appear that physicians, by dressing in black, have unluckily chosen the colour of all others the most absorbent of odours and other exhalations, and of course most dangerous to themselves and patients." Our readers will find some interesting facts in corroboration of this opinion, which Dr. Dunghison has extracted from Dr. Stark's memoir, which we have not space to insert.

The form of some parts of the dress usually worn is often productive of injurious consequences; thus the general use of the stock has probably rendered affections of the head more frequent, and VAN MONS, in his treatise on the ophthalmia of the Dutch army, has shown that it arose in a great measure from the pressure exercised by this article of dress. In female dress, also, the corset, although when properly made and worn, it affords great support and comfort, has been productive of much injury. The late Dr. GODMAN has, however, so fully pointed out the evils attendant on an improper use of parts of female dress, that we cannot do better than to refer our readers to his excellent paper on the subject.

The following remarks of our author cannot be too often repeated.

"Wet clothes should not be suffered to dry slowly on the body, especially by exposure to a current of air, which gives occasion to rapid evaporation and consequent refrigeration. In all such cases, dry clothing should be substituted, and the skin well dried and rubbed, or if this is impracticable, the wet garments had better be dried on the body by artificial heat. If we are compelled to be exposed to a draught of air, especially when heated, as where the wind enters through a broken window, or through some crevice, the part with which the air comes in contact, should be carefully covered. We could not, *a priori*, suppose that any serious mischief could result from so trifling an exposure; but experience has sufficiently shown that such is frequently the case, and that there is greater danger where the capillary action of a small portion of the body is irregularly modified, than when the same morbid agent is directed over an extensive surface, or over the whole body. The invalid must be especially careful to suit the quantity and quality of his clothes to the temperature, and not quit his winter clothing too soon. It is impossible to indicate any fixed period of the year, when the change should be accomplished; but considerable caution is required on the part of every one, and especially of those that are liable to pulmonary, abdominal, or neuralgic affections."

In speaking of the effects of bathing, which forms the subject of Chapter IV. Dr. Dunghison observes, that the reaction which takes place on emerging from a cold bath, is not as great as has been supposed, and that persons have been misled with regard to it, from not

adverting to the fact, that all our sensations of heat and cold are merely relative. We cannot agree with him fully in this opinion; the excitement that follows the use of the cold bath is of too long continuance, and the sensations of warmth are too vivid to be merely a return to the state which existed previous to the chill occasioned by the water.

In making this observation, we are alluding to cases where the cold bath is used as it generally is, merely for a short period of time; where an individual remains in it beyond this, we readily admit that it acts rather as a sedative than a stimulant or tonic. With his advice as respects the use of all kinds of bathing, we heartily coincide, and earnestly recommend a careful perusal of this part of his work both to the medical and the general reader, being fully convinced that many evils have resulted from an abuse of this important hygienic agent.

In considering the subjects of exercise and sleep, which are next taken up, Dr. Dunglison has exhibited his usual industry and perspicacity in the selection and arrangement of facts, and we regret that circumstances will not allow us to notice them in detail; but as we take for granted, that the work itself will, ere long, be in the hands of most of our readers, we shall content ourselves with the following extract, in refutation of a very common, and we have long been convinced, a very prejudicial error; namely, that the atmosphere of a bed room should not be modified by a fire.

"Why should the body be surrounded by a temperature nearly equal to its own, whilst the face is in contact with air, perhaps near the freezing point, and often loaded with humidity. There is certainly more wisdom in the opinion of Kitchener, that a fire in the bed room is sometimes indispensable, and that during half the year, those who can afford it, would do wisely to have one."

This is peculiarly advisable in all cases of pulmonary or bronchial disease; how often do patients complain that although they scarcely cough during the day, that it comes on immediately on retiring to rest? The reason must be obvious. During the day, they breathe a warm atmosphere congenial to the irritated state of their lungs, which is suddenly exchanged for the cold, and perhaps humid air of their bed chamber. At the same time, the practice of some, of keeping the chamber at an elevated temperature, is equally objectionable; all that is required, is sufficient fire to moderate the great and sudden change above alluded to.

In the last chapter the author treats of corporeal and mental occupations, and points out the influence they exercise in the maintenance of health or the production of disease.



"This influence," he observes, "is caused by a few circumstances, and of these, the degree of exertion, of elevation and depression of temperature, of greater or less exposure to vicissitudes, the sedentary or other character of the calling, and the presence or absence of noxious exhalations, are the most prominent."

He also notices that the danger of even the most insalubrious avocations is not so extended as might be supposed, from the power which the living system possesses of becoming in some degree habituated to the most malign influences. It is a curious fact that many of those employments which are generally supposed to be the most unhealthy, are by no means so; thus workmen exposed by their trades to most noisome animal odours, do not appear to suffer, whilst a person unaccustomed to these emanations is overpowered.

Much has been said and written on the injurious consequences of literary employments, and that the mind in some cases wears out the body there can be no doubt, but this is less frequently the case than is imagined. The observations of Dr. Dunghlison on this point are well deserving of attention, and clearly show that the diseases with which the literary are specially afflicted are identical with those which result from any sedentary employment. In fact, where due attention is paid to exercise, it has been proved that the severest intellectual employment, so far from shortening, in a great measure tends to prolong life.

We have no faith in the tables of comparative longevity in the different professions as proofs, on many accounts, as none of them are sufficiently extended, added to which so many circumstances require to be taken into view, that it is impossible to decide from them whether the effects of intellectual labour had any thing to do with the prolongation or abridgment of the existence of the examples cited.

Whilst on this subject, we cannot refrain from returning our warmest meed of approbation, for the feeling and dignified notice he has given of the intellectual endowments and labours of the late Dr. Godman; and it is peculiarly gratifying in coming from one so well calculated to appreciate them.

"The propriety, says he, of introducing into the list the name of Godman, who, in spite of the disadvantages of fortune, and a brief existence, spent in sickness and in suffering, succeeded in elevating himself to a high rank among physicians and naturalists, no one will deny."

And again—

"If we inquire into the nature and number of the contributions made to science by many of those on his list, (Madden,) we find that but few of them

had distinguished themselves, at the same age, to any thing like the extent of Bichat, Beclard, Georget, or Godman; and if we suppose, for a moment, what might have been produced by these individuals, if they had been permitted to live as long as Corvisart, Hoffman, or Tissot, it cannot but be believed that their title to distinction would have been yet more signal."

The work concludes with a supplementary chapter, containing a brief exposition of the author's views on malaria, in the form of a deposition, and tables of temperature, and of the comparative digestibility of different alimentary substances, forming a useful appendix to the work.

We are conscious that the importance of the subject matter of this work deserved a more extended notice, but we trust we have said enough to induce our readers to judge of it for themselves, and we rest assured that few will be disappointed.

R. E. G.